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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,908	10/24/2003	Jack Lees	HESI.110405	9891

30903 7590 09/27/2004

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EXAMINER

AHMED, SAMIR ANWAR

ART UNIT PAPER NUMBER

2623

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,908	Applicant(s) LEES ET AL.	
	Examiner Samir A. Ahmed	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/26/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Obviousness Type Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,690,820 to Lees et al.

Claim 1, of the instant application recite the same features of claim 1 of U.S. Patent No. 6,690,820. "3 D spatial coordinates, each 3 D coordinate" in claim 1 is obvious in view of " voxels, each voxel" recited in claim 1 of the Patent, because a voxel by definition is a pixel with 3D spatial coordinates.

As to claim 2, claim 2 or 3 of the Patent further discloses the recited limitations.

As to claim 3, the limitation, "wherein said preselected data value is identical to said compared data value from said at least one of said first 3D volume data set and said second 3D volume data set that is within the data value range" is obvious in view of the disclosure of claim 1 for the following reasons:

1) The preselected data value to be inserted, is for each compared data value from said at least one of said first 3D volume data set and said second 3D volume data set that is within the data value range. A compared data value from said at least one of said first 3D volume data set and said second 3D volume data set must be identical (or similar) to a data value within the data value range to satisfy being within the data value range. The preselected data value to be inserted can only be identical to data values within the data value range including the compared data value. For example, suppose that the compared data value from said at least one of said first 3D volume data set and said second 3D volume data set is 5, the data value range is 3-6. It is clear that the compared data value 5 is within the data value range 3-6 and is identical to the data value 5 within the data value range 3-6. The preselected data value to be inserted can only be identical to a data value 3, 4, 5, or 6 (the compared data value 5 is included) in order to be within the data value range 3-6.

2) The nature of the problem to be solved dictates the outcome and provides the evidence for obviousness, in this case the preselected data value to be inserted, can only be identical to a data value within the data value range (for example 3-6) which includes the compared data value (for example 5) in order to be within the data value range (for example 3-6), any other data value for the preselected data value would not satisfy the "compared data value that is within said data value range", one of ordinary skill in the art based on that dictated solution of that problem would be able to pick a value for the preselected data value that is identical to a data value within the data value range including the compared data value to satisfy the "compared data value that is

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within said data value range". There is no other solution that would satisfy that condition.

As to claim 4 refer to claim 3 rejection.

As to claim 5, claim 5 of U.S. Patent No. 6,690,820 further discloses the recited limitations.

Claim 6, of the instant application recite the same features of claim 8 of U.S. Patent No. 6,690,820. "3D spatial coordinates, each 3D coordinate" in claim 6 is obvious in view of " voxels, each voxel" recited in claim 8 of the Patent, because a voxel by definition is a pixel with 3D spatial coordinates. " imaging an enhanced 3D volume data set" recited in claim 6 is obvious in view of "imaging an output 3D volume data" recited in claim 8 of the Patent, because as supported by the disclosure the output 3D volume data set is an enhanced 3D volume data set.

As to claim 7, claim 9 of the Patent further discloses the recited limitations.

As to claim 8 refer to claim 3 rejection.

As to claim 9 refer to claim 4 rejection.

As to claim 10, refer to claim 1 rejection. "displaying an enhanced 3D volume data set" recited in claim 10 is obvious in view of "displaying at least one section of said output 3D volume data set" recited in claim 1 of the Patent, because as supported by the disclosure the output 3D volume data set is an enhanced 3D volume data set.

As to claim 11, refer to claim 2 rejection.

As to claim 12 refer to claim 3 rejection.

As to claim 13 refer to claim 4 rejection.

As to claim 14 refer to claim 5 rejection.

As to claim 15 refer to claim 1 rejection. A program storage device readable by a machine embodying a program of instructions to perform a method is obvious in view of a method.

As to claim 16 refer to claim 2 rejection.

As to claim 17 refer to claim 3 rejection.

As to claim 18 refer to claim 4 rejection.

As to claim 19 refer to claim 5 rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is 703-305-9870. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

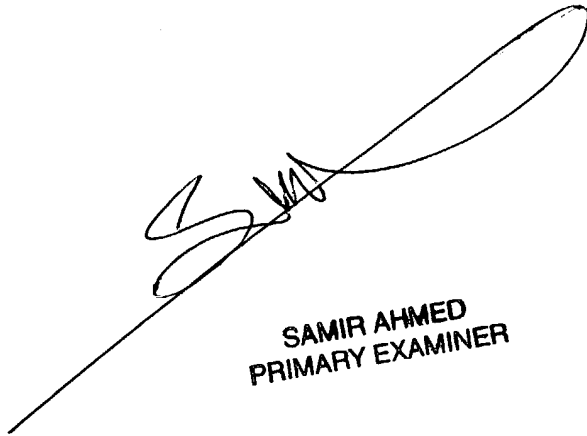
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SA

A handwritten signature in black ink, appearing to be 'SA', is written over a diagonal line. The signature is stylized and cursive.

SAMIR AHMED
PRIMARY EXAMINER